

Plant diseases.—WHETZEL and STEWART,¹⁶ contrary to the common belief, advocate the cultivation of pear orchards if a crop of fruit is desired. In this view they are upheld by HEDRICK of the State Station, who found that blight epidemics are not necessarily dependent upon cultivation and manuring. No immunity to the disease was obtained by the use of certain blight remedies.

SACKETT¹⁷ has described the appearance of this new bacterial disease in the field, and has given the manner of infection, together with a complete morphological, cultural, physical, and biochemical description of the causal organism, *Pseudomonas medicaginis* sp. n. The work is well supported by numerous inoculations. The only thing lacking in this well-balanced investigation is a bibliography.—VENUS W. POOL.

Source of nitrogen for molds.—RITTER¹⁸ finds that the ammonium salts of mineral acids as the source of nitrogen for the molds is inverse to the strength of the acid forming the negative ion of the salt. The author attributes this to the toxic effect of the acid liberated by the assimilation of the ammonium ion. For instance, mono-ammonium or diammonium phosphate is a far better source of nitrogen than the ammonium salts of sulfuric, hydrochloric, or nitric acids. The so-called "Nitratpilze" (*Aspergillus glaucus*, *Mucor racemosus*, *Cladosporium herbarium*) gave on the average a greater yield of organic material from the two ammonium phosphates mentioned than from potassium nitrate. The yield from the ammonium salts of the stronger mineral acids was very much lower.—WILLIAM CROCKER.

Excretion of salts by *Statice*.—SCHTSCHERBACK¹⁹ has investigated the excretion of salts by the leaves of *Statice Gmelini*. Many leaves of halophytes are known to excrete salts in considerable quantities by means of the glands described by DEBARY and others. Leaves of *Statice Gmelini*, floating on pure water, are soon freed from their contained salt and thereafter excrete water only. The amount of excretion of a leaf floating on a solution of a substance depends upon the substance and the concentration of it used; sulfates and chlorids of sodium, potassium, and magnesium tending to increase it, while calcium compounds and sugars decrease it. The amount of excretion does not depend upon the turgor pressure in the leaf cells.—R. CATLIN ROSE.

***Physcia villosa* in North America.**—In a recent number of this journal (49: 320. 1910) I recorded this plant from southern California. Since then I have

¹⁶ WHETZEL, H. H., and STEWART, V. B., Fire blight of pears, apples, quinces, etc. Bull. N.Y. Cornell Exp. Sta. 272:31-51. figs. 5-231. 1910.

¹⁷ SACKETT, W. G., A bacterial disease of alfalfa. Bull. Colo. Exp. Sta. 158:1-32. pls. 1-3. 1910.

¹⁸ RITTER, G., Ammoniak und Nitrate als Stickstoffquelle für Schimmelpilze. Ber. Deutsch. Bot. Gesell. 27:582-588. 1909.

¹⁹ SCHTSCHERBACK, JOHANN, Ueber die Salzausscheidung durch die Blätter von *Statice Gmelini*. Beih. Deutsch. Bot. Gesell. 28:30-34. 1910.